EPA Comments on the draft OU1 Groundwater and Data Gap Investigation Workplan dated April 1, 2013
South Dayton Dump & Landfill
April 10, 2013

General Comments

1. For clarity, the workplan should be careful to distinguish between the objectives of the RIFS, those of the multi-phased OU1 Groundwater and Data Gap Investigation, and those specifically of Phase 1A.
    - The opening paragraphs and DQO Work Objectives (pages 1-2) should summarize the overall goals and purpose of the phased groundwater/data gap investigation as established in the DQO table. The purpose for summarizing the overall strategy of the investigation is to provide context for the proposed Phase 1A work.
    - There is no mention of identifying sources of contamination for the purpose of control/mitigation, which is one of the objectives discussed in planning teleconferences.

2. Phases 1B, 2A and 2B will be planned pending the Phase 1A results. This workplan should be more focused on Phase 1A, specifically relating the proposed work to the goals, purpose and outcomes of Phase 1A.
    - The title should indicate "Phase 1A Work Plan".
    - As described in Comment #1 above, the workplan needs to relate Phase 1A to the overall purpose and strategy of the entire investigation, and describe how the findings of Phase 1A will be used to inform the later phases, without going into unnecessary detail about later phases.
    - EPA suggests removing Sections 2.2, 2.3 and 2.4 of this work plan and incorporating them into the introductions of the workplans for later phases, if appropriate.

3. The workplan says that insufficient information exists to develop and evaluate remedial alternatives. The insufficient information is more specifically with respect to alternatives that address migration of contaminated groundwater and landfill gas.

4. Throughout the workplan, it is proposed to drill to the top of the till layer at approximately 675 feet above MSL. If the strategy is to identify areas where releases have occurred, then this plan may be appropriate. If the intent is to determine the bottom of the Upper Aquifer Zone, this strategy may need more clarification or discussion.

5. It needs to be specified whether groundwater samples will be filtered or unfiltered. Samples taken with direct push technology need to be filtered.

6. In several places the workplan describes the objective of investigating groundwater quality in the upper aquifer. This is too general of a statement, as Phase 1A as described will not investigate groundwater quality below the top 5 feet of the upper aquifer. With respect to vapor intrusion, sampling near the top of the water table is appropriate. However, as has

been raised in previous discussions, the findings from this phase cannot be generalized to groundwater quality throughout the upper aquifer as a whole as future work is planned and remedial alternatives developed.

Specific Comments

7. Section 2.1
   - Page 11: The first sentence says boreholes will be advanced at horizontal distances no greater than 100 feet. We assume that means no greater than 100 feet from each other throughout the area of interest. However, in Area 5, the area west and slightly south of TT8 has an interval between borings that is greater than 100 feet.
   - Page 11: The second paragraph mentions both direct push and rotosonic drilling methods. Are rotosonic methods being considered in Phase 1A? If so, some sections in the workplan specifically reference using DPT drilling methods, while other sections do not specify a method, so what are the criteria for choosing the drilling method? Was the mention of rotosonic methods simply to make the language generic to apply to later phases of the investigation? If so, confine this discussion to Phase 1A to avoid confusion.
   - Page 11: The described procedure is that if field screening identifies contamination, a Sudan IV dye test (or equivalent) will be conducted to delineate NAPL. Describe what that field evidence consists of (e.g. visual, olfactory) and what will be considered as evidence of contamination.
   - Page 12: The last paragraph mentions the potential for a soil vapor investigation. It is unclear in which phase of future work this would occur, and it is not described in the subsequent phases in the DQO table. Additional clarification is needed.

8. Section 2.1.1
   - Page 13: The third paragraph describes determining if contaminants associated with the residual LNAPL are in groundwater. Has the LNAPL been fingerprinted or will it be? If not, how will the constituents observed in groundwater samples be connected with the LNAPL?
   - Page 14: The description of the bail-down test doesn't seem appropriate to conditions at MW-219. NAPL is not currently observed in the well, so the purpose of the bail-down test would be to draw down the water level in the well to see if NAPL that may be accumulating just under or at the water table might flow into the well. Also, hand bailing is unlikely to induce appreciable drawdown given the permeability of the soil, so a small pump may be more a practical method for conducting this test.

9. Section 2.1.3
   - A groundwater sample from the top 5 feet of shallow groundwater is proposed, and then two sentences later, soil and groundwater samples from each borehole are proposed. Are the groundwater samples in the second reference different from those in the first?

10. Section 2.1.4
    - We note that the workplan does not take the opportunity to investigate the source of PCBs found in this area.

11. Criteria for depth of soil sampling
    In some sections there are no criteria listed, and in others there is a list of criteria. It is unclear if that list is meant for just those specific sections or if it more broadly applies to all the sections that describe soil sampling.
    - Section 2.1.3: There is no description of how the soil sampling depth will be determined.
    - Section 2.1.4: The last sentence mentions collecting a soil sample by using "the greatest PID reading". Is this the only criterion? Will a soil sample be collected and analyzed if the greatest PID reading is less than 50 ppm?
    - Section 2.1.5: There is no description of how the soil sampling depth will be determined.
    - Sections 2.1.6, 2.1.7, and 2.1.8: Here, soil samples are contingent on field screening showing potential contamination. Three criteria are mentioned in 2.1.6 and 2.1.7, but only PID measurements are mentioned in 2.1.8. Is the intention to meet all criteria or any one of the criteria?

12. Section 2.1.7
    - An additional boring was supposed to be located southwest of GP15-09 (see EPA comments dated March 12, 2013, #6.b).
    - We note that the workplan does not take the opportunity to investigate the source of PCBs in this area.

13. Section 2.1.8
    - This section states that samples will be analyzed for VOCs but the previous version of the table now in Attachment B called for sampling 1 in 4 locations for metals and naphthalene.
    - We note that the workplan does not add borings west of TT10 to investigate this potential source area where drums were reportedly dumped.

14. Section 6.0
    - It is recommended that this section also include providing the groundwater sampling logs with the report(s).
    - This work should result in a report that summarizes the findings of Phase 1A and proposes work to be performed in Phases 1B and 2A. The revised RIFS report is a separate effort.

15. Attachment B
    - The table has not been updated to reflect the revised areas. The area around GP13-09/VAS-09 is now Area 6, and the area around GP15-09/VAS-08/TT-9 is Area 5.
    - On page 9, under the "Proposed Depth of Investigation" column, a test trench should be described rather than a test pit.

16. Attachment C, Test Trench Excavation Procedures
    - Indicate why this attachment is included, but field procedures for other aspects of the Phase 1A investigation are not. Were these revised from the procedure in the 2008 QAPP?